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**DOCKET NO. D-2012-017 CP-1**

**DELAWARE RIVER BASIN COMMISSION**

**Philadelphia Gas Works  
Richmond Plant  
Industrial Surface Water Withdrawal  
City of Philadelphia, Philadelphia County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted by Philadelphia Gas Works (PGW or docket holder) to the Delaware River Basin Commission (DRBC or Commission) on May 7, 2012 for an allocation of surface water and review of an existing surface water withdrawal project (Application). The withdrawal facilities are existing and used for industrial purposes and as such, are not subject to prior allocation by the Pennsylvania Department of Environmental Protection (PADEP).

The Application was reviewed for inclusion of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Philadelphia City Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on September 12, 2012.

**A. DESCRIPTION**

**1. Purpose.** The purpose of this docket is to approve an existing withdrawal of up to 229.648 million gallons per month (mgm) of surface water from the docket holder's Delaware River surface water intake. Water is used for non-contact cooling of compressors and heat exchangers and fire suppression purposes at the PGW Richmond plant.

**2. Location.** The PGW Richmond Plant is located between East Venango Street and Castor Avenue approximately ¼ mile from the Delaware River in the City of Philadelphia, Philadelphia County, Pennsylvania. The project intake is located in the tidal portion of the Delaware River (Water Quality Zone 3), approximately 4,500 feet downstream of the confluence of Frankfort Creek at River Mile 103.6 (Delaware River). The intake is located in the Delaware River watershed.

3. **Area Served.** The project withdrawals will continue to serve only the cooling needs of the process compressors and heat exchangers and fire suppression purposes at the PGW Richmond Plant. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. **Physical features.**

a. **Design criteria.** The PGW is a city-owned utility that supplies natural gas to customers in Philadelphia and the surrounding region. The Richmond Plant liquefies and stores natural gas during periods of low demand and regasifies it to augment pipeline gas during peak demand periods. The plant has two systems that may be used to liquefy natural gas. The cascade refrigerant system process contains compressors and heat exchanger units that require water for cooling purposes. The other system, which is currently being used, is an expander plant which does not require water for cooling purposes. Water is also constantly cycled through the system to maintain pressure in the fire suppression system. All of the water necessary for fire suppression and cooling purposes is withdrawn from the Delaware River. After use, the water is discharged back into the Delaware River at a location approximately 800 feet upriver from the project intake.

The present average and maximum water use at the plant are 4.365 million gallons per day (mgd) (135.315 mgm) and 7.408 mgd (229.648 mgm), respectively. The docket holder has projected no increase in the future water demand (10-year projection) at the plant. The allocation of 229.648 mgm should be sufficient to meet the future demands of the plant.

b. **Facilities.** Surface water is withdrawn from the Delaware River through a 6.1 foot by 6 foot reinforced concrete chamber with a 5.3 foot by 5 foot rectangular bar screen at the interface with the river. A 48-inch diameter reinforced concrete subaqueous pipe flume conveys the water approximately 1,100 feet to a 24-foot deep wet well located on the southwest corner of the PGW Richmond plant site. Water is taken through revolving screens to remove debris and then through strainers to remove particle size down to 0.01 inch. Five pumps totaling 24,600 gpm (35.420 mgd) withdraw water from the wet well to provide water to the plant. All of the water withdrawn from the Delaware River is used for non-contact cooling purposes in the process compressors and heat exchangers and in the fire suppression system.

The existing project intake has the following characteristics:

INTAKE NO.	WITHDRAWAL WATER BODY	PUMP CAPACITY	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Delaware River Intake	Delaware River	35.420 mgd	2,934	1969

The surface water withdrawal is measured based on hours of operation.

The surface water is not treated prior to use.

The cooling water system is not interconnected with any other distribution system.

A portion of the plant including the pump house/wet well is located in the 100-year floodplain.

Potable water is supplied to the PGW Richmond Plant by the City of Philadelphia.

c. **Other.** Once-through non-contact cooling water is discharged through outfall No. 004 to the Delaware River, which was most recently approved by DRBC Docket No. D-1976-055 CP-2 on March 7, 2012. PADEP approved the National Pollutant NPDES Permit No. PA0012882 on January 25, 2010 (effective February 1, 2010) which includes final effluent limitations for the project based on a discharge 6.67 mgd from Outfall No. 004.

Sanitary wastewater from the project is conveyed to the City of Philadelphia northeast wastewater treatment plant which was approved by DRBC Docket No. D-62-1 CP on July 22, 1964.

d. **Cost.** There is no construction associated with this existing facility and therefore no costs are associated with this approval.

e. **Relationship to the Comprehensive Plan.** The PGW Richmond plant was not formerly included in the Comprehensive Plan.

## **B. FINDINGS**

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The PGW Richmond Plant's non-contact cooling water discharge has been docketed since its initial approval on December 8, 1976. The facility's most recent discharge docket No. D-1976-055 CP-2, approved March 7, 2012 contained Condition II.p. that required PGW to submit an application to the Commission for its existing surface water withdrawal by May 6, 2012. PGW's surface water withdrawal application was received by the Commission on May 10, 2012.

PGW Richmond Plant has a Certificate of Entitlement (No. 236) for the total withdrawal of 1,077.48 million gallons per month of water from the Delaware River. The certificate was

issued on July 15, 1976 and includes entitlements of 21.550 mgm consumptive use and 1,055.930 mgm non-consumptive use.

Based on entitlement data, the project withdrawals, used for the purpose of industrial non-contact cooling, result in an estimated consumptive use of 2 percent of the total water use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

Section 2.50.2 of the Commission's *Water Code* requires metering, recording, and reporting for surface water and groundwater withdrawals in the Basin. In accordance with Section 2.50.2.A, the docket holder is required to install a meter on project surface water withdrawal by December 31, 2013 (Condition I.f.). A letter confirming that a meter has been installed on the surface water source must be submitted to the Commission within 30 days of the installation of the meter (see Condition No. I.g.).

Section 2.3.5.1 C. of the Commission's *Rules of Practice and Procedure (RPP)*, requires industrial and commercial water withdrawals in excess of one million gallons per day to develop a contingency plan including emergency conservation measures to be instituted in the event of a Commission declared drought or other water shortage. Resolution No. 83-14 amended the Commission's *Water Code* (Section 2.1.4) to include the conservation goal of a 15 percent reduction in depletive use during drought conditions. Hereafter referred to as drought management and contingency plans (DMCPs), DMCPs must contain the following: source of water supply; the average daily and monthly peak water withdrawal; average daily and peak monthly consumptive use (difference between quantity withdrawn and quantity returned to the ground or surface waters of the basin); description of recycling and conservation measures; point of discharge (where water is returned or discharged); types of products produced; normal employment levels (numbers); and estimated employment (numbers) and economic impact for curtailment of water usage for the following levels of curtailment: 10%; 25%; 35%; 50% and 100%. A DMCP shall be submitted to the Executive Director within 6 months after the date of docket approval. The Executive Director shall review the DMCP and either require modifications or provide approval in writing if the DMCP is found to be in accordance with the Commission requirements. The docket holder shall implement the DMCP upon direction by the Executive Director. (see Condition II.l.).

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

### **C. DECISION**

I. Effective on the approval date for Docket No. D-2012-017 CP-1, the project and the appurtenant facilities described in the Section A “Physical features” shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section A “Physical features” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s. The docket holder shall register with and report to the PADEP all surface and ground water sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

b. The intake and operational records shall be available at all times for inspection by the DRBC.

c. The withdrawal shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

d. No withdrawal shall be pumped above the maximum instantaneous rate and allocations as indicated below:

INTAKE NO.	MAXIMUM INSTANTANEOUS RATE	MONTHLY ALLOCATION
Delaware River Intake	5,145 gpm	229.648 mg

e. The docket holder shall pay for surface water use in accordance with the provisions of Resolution No. 74-6, as amended.

f. By December 31, 2013, the project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually by June 30 and shall be available at any time to the Commission if requested by the Executive Director.

g. Within 30 days of the installation of the flow meter required in Condition “f.”, the docket holder shall notify the DRBC in writing that the meter has been installed.

h. Each new water service connection shall include a water meter in accordance with the DRBC’s Resolution No. 87-7 (Revised).

i. The docket holder shall implement to the satisfaction of the PADEP, the continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the PADEP on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

j. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

k. The docket holder shall continue to implement its Water Conservation Plan as approved by PADEP, and shall report to the PADEP on actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

l. The docket holder shall prepare and submit a DMCP to the Commission within 6 months (March 12, 2013) of docket approval. The Executive Director shall review the DMCP and either require modifications or provide approval in writing if the DMCP is found to be in accordance with the Commission requirements. The docket holder shall implement the DMCP upon direction by the Executive Director.

m. Sound practices of excavation, backfill and reseeding shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

n. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission.

o. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

p. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

q. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below (or the later date established by an extension that has been timely requested and

approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

r. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

s. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

t. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

u. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

v. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

**BY THE COMMISSION**

**APPROVAL DATE:**

**EXPIRATION DATE:      September 12, 2022**

**DRAFT**